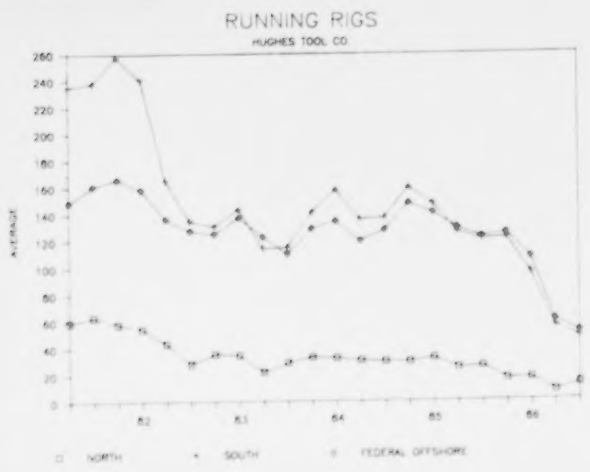
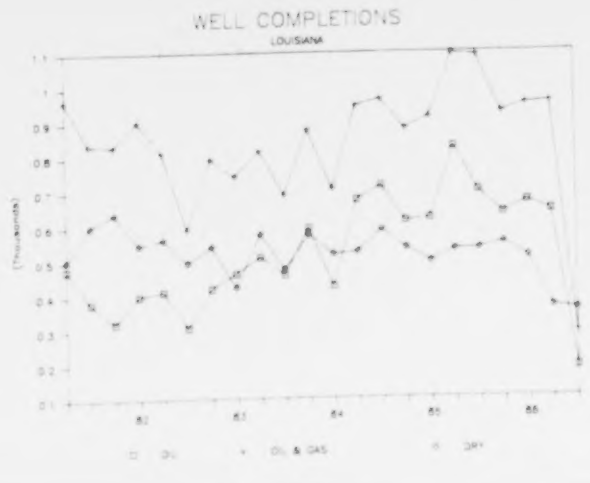
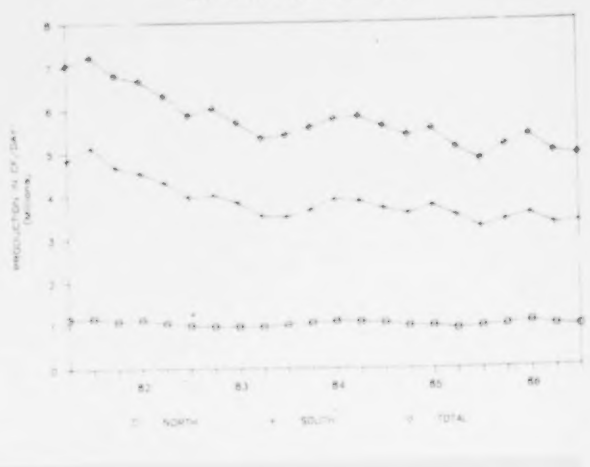
Drilling







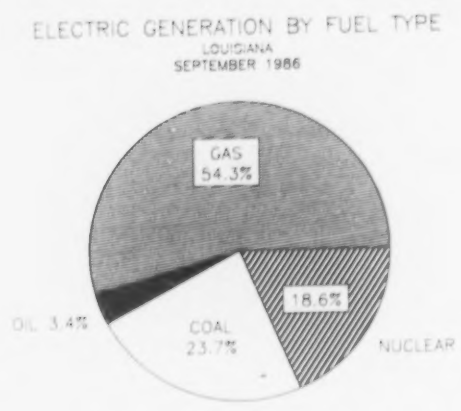
Figures represent TOTAL except when otherwise noted

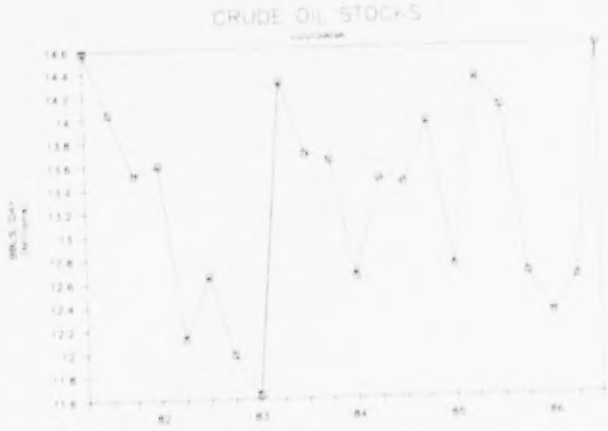
Totals may not add due to rounding

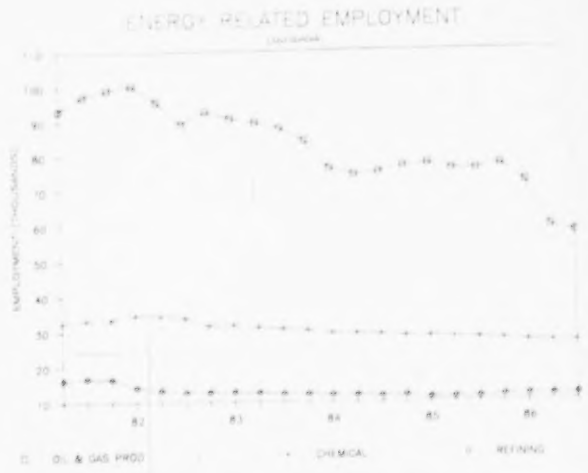
Indicator	1981	1982	1983	1984	1985	86.1	Apr	May	June	July	Aug	Sept	Year to Date Through Last Month Reported Sept 1985	Sept 1986	% Change
OIL WELLS COMPLETED*	1123	1122	1393	1792	2139	429	91	178	222	43	26	26	1655	1015	-38.7%
North	294	275	305	389	420	193	26	19	10	43	11	8	300	300	0.0%
South	143	137	319	239	215	45	46	27	19	9	13	14	187	173	-7.5%
Offshore	1560	1534	2017	2420	2774	667	163	224	251	85	50	48	2142	1488	-30.5%
Total	1333	1017	588	680	721	124	22	45	109	14	17	26	524	357	-31.9%
GAS WELLS COMPLETED*	324	323	234	190	281	105	24	19	20	13	15	9	226	205	-9.3%
North	225	227	286	204	243	53	32	28	15	7	8	2	202	145	-28.2%
South	1882	1567	1108	1074	1245	282	78	92	144	34	40	37	952	707	-25.7%
Offshore	1134	1067	897	1195	1178	203	41	64	73	83	70	54	860	598	-30.5%
Total	853	802	654	669	824	225	46	27	30	35	28	14	477	405	-15.1%
DRY WELLS COMPLETED*	261	273	488	283	296	78	23	28	28	19	14	23	214	213	-0.5%
North	2248	2142	2040	2157	2098	506	110	119	131	147	112	91	1551	1216	-21.6%
South	58	48	29	38	25	17	8	6	8	8	15	13	28	12	-57.1%
Offshore	244	168	128	147	129	64	46	37	38	36	27	31	132	45	-65.9%
Total	154	137	125	132	128	31	15	25	62	61	64	72	131	49	-62.6%
RUNNING RIGS (Ave.Hughes Tool)	456	345	282	309	283	112	69	118	104	105	106	116	290	106	-63.4%
North															
South															
Offshore [Federal]															
Total															

*Figures represent a reporting change from La. Office of Conservation reported figures to figures reported by Petroleum Information Corporation and the API. CES maintains additional data in the Indicators Database.

Production & Consumption







Figures represent TOTAL except when otherwise noted

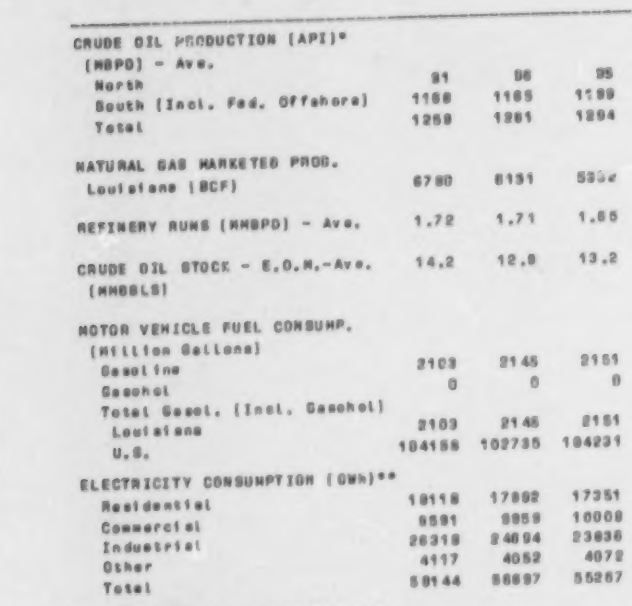
Totals may not add due to rounding

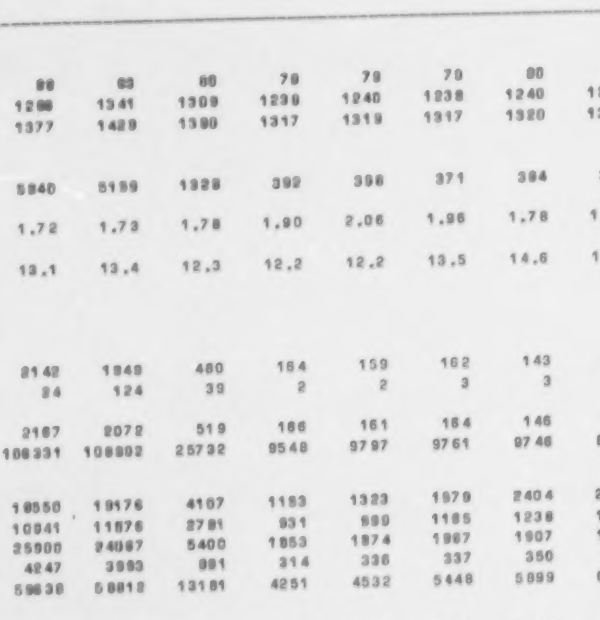
Indicator	1981	1982	1983	1984	1985	86.1	Apr	May	June	July	Aug	Sept	Year to Date Through Last Month Reported Sept 1985	Sept 1986	% Change
CRUDE OIL PRODUCTION (API)* (MBPD) - Ave.															
North	91	96	95	98	93	88	79	79	79	80	84	85	89	81	-9.0%
South (Incl. Fed. Offshore)	1168	1185	1199	1288	1341	1309	1239	1240	1238	1240	1255	1315	1338	1273	-4.9%
Total	1259	1281	1294	1377	1429	1398	1317	1319	1317	1320	1338	1400	1427	1353	-5.2%
NATURAL GAS MARKETED PROD. Louisiana (BCF)	6780	6131	5936	5840	5159	1328	392	398	371	384	376	406	3886	3848	-0.1%
REFINERY RUNS (MMBPD) - Ave.	1.72	1.71	1.65	1.72	1.73	1.78	1.90	2.06	1.96	1.78	1.95	1.85	1.89	1.88	11.2%
CRUDE OIL STOCK - E.O.M.-Ave. (MMBBLS)	14.2	12.8	13.2	13.1	13.4	12.3	12.2	12.2	13.5	14.6	14.6	14.3	13.7	13.1	-4.4%
MOTOR VEHICLE FUEL CONSUMP. (Million Gallons)															
Gasoline	2103	2145	2151	2142	1949	480	184	159	162	143	142	146	1484	1396	-5.9%
Gasohol	0	0	0	24	124	39	2	2	3	3	3	5	84	57	-32.1%
Total Gasol. (Incl. Gasohol)	2103	2145	2151	2167	2072	519	186	161	164	146	146	150	1568	1453	-7.3%
Louisiana	104158	102735	104231	106331	106902	25732	9548	9797	9761	9746	8854	8116	81462	89300	9.6%
U.S.															
ELECTRICITY CONSUMPTION (GWh)**															
Residential	18118	17892	17351	18550	19176	4167	1183	1323	1979	2404	2517	2271	15083	15754	4.4%
Commercial	9591	9859	10008	10941	11576	2781	931	999	1185	1238	1254	1250	9786	9618	9.5%
Industrial	26319	24694	23636	25900	24067	5400	1853	1874	1987	1907	1915	1917	18233	16833	-7.7%
Other	4117	4052	4072	4247	3993	991	314	336	337	350	362	342	3047	2932	-3.8%
Total	58144	56697	55267	59638	58812	13181	4251	4532	5448	5899	6047	5780	45149	45137	0.0%
ELECTRICITY PRODUCTION (GWh)**															
Gas Generated	30948	35584	28911	29380	27735	4393	1692	2410	2732	3589	2528	2571	22660	19915	-12.1%
Oil Generated	2835	940	358	148	100	8	1	3	9	86	300	3	85	410	382.4%
Coal Generated	1528	4998	6377	9830	13988	3555	865	784	1152	1282	1382	1803	10572	10833	2.5%
Nuclear Generated	0	0	0	0	2458	1825	678	1208	1128	842	1252	1294	747	8428	1028.2%
Total Generated	44111	41832	37044	39330	44281	8781	3437	4416	5021	5799	5462	5670	34084	39585	16.2%

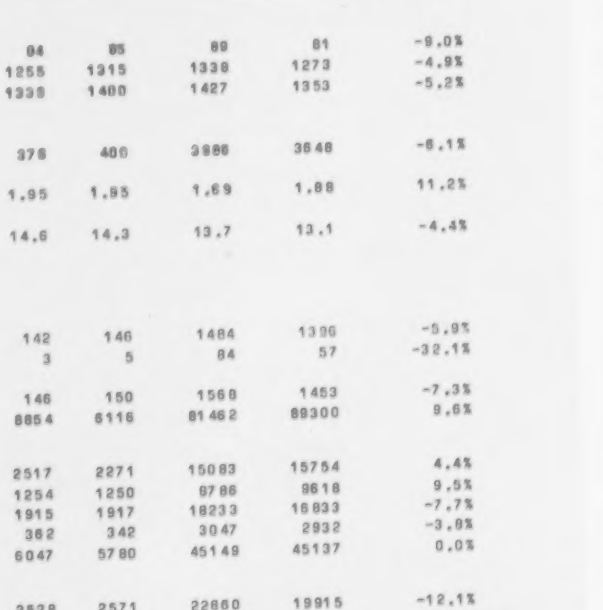
*Figures represent a reporting change from La. Office of Conservation reported figures to figures reported by Petroleum Information Corporation and the API.

**1 GWh = 1 Million KWh

Prices & Revenues







Figures represent TOTAL except when otherwise noted

Totals may not add due to rounding

Indicator	1981	1982	1983	1984	1985	86.1	Apr	May	June	July	Aug	Sept	Year to Date Through Last Month Reported Sept 1985	Sept 1986	% Change
ELEC. PRICES (Cents/KWH) - Ave.															
Industrial															
CLECO	4.6	5.3	5.7	5.6	4.5	4.4	4.0	3.7	3.9	3.9	4.3	4.0	4.6	4.1	-10.9%
GSU	3.2	3.5	3.7	3.5	5.1	4.7	4.4	4.7	4.4	4.1	4.2	4.2	5.2	4.4	-15.4%
LP&L	4.0	4.4	4.6	4.6	4.2	4.4	4.1	4.4	3.8	4.0	4.3	4.2	4.2	4.2	0.0%
SWEPCO	2.9	3.8	4.8	4.8	5.2	5.2	5.3	5.5	5.3	5.2	5.0	5.0	5.1	5.2	2.0%
WELLHEAD PRICE OF OIL ($/BBL) - Ave.															
Louisiana	35.54	32.45	30.02	29.67	27.23	20.71	13.36	13.60	13.75	12.22	12.63	13.93	27.12	15.74	-42.0%
U.S.	31.80	28.54	26.13	25.88	24.08	18.00	10.83	10.90	10.84	9.39	9.92	11.20	24.00	13.01	-45.8%
NAT. GAS PRICES ($/MCF)-Ave.															
Wellhead - U.S.	1.98	2.47	2.59	2.66	2.53	2.12	1.84	1.72	1.62	1.57	1.55	1.54e	2.59	1.79	-30.9%
Interstate Undet. Sales [1]	3.13	3.75	4.28	4.12	3.91	3.60	3.37	3.28	2.89	2.87	3.13	3.18	3.89	3.35	-13.9%
La. Intrastate [2]	3.38	3.89	3.74	3.67	3.26	2.73	2.60	2.72	2.64	2.44	2.48	2.55	3.34	2.62	-21.6%
PRINCIPAL ENERGY RELATED REVENUES (Millions $)															
Sev. - Oil & Condensate	815.8	776.8	684.1	833.5	898.2	151.3	32.6	28.2	23.8	23.2	24.7	21.8	455.4	306.3	-32.9%
Sev. - Natural Gas	184.2	147.5	132.7	131.3	121.1	22.3	9.9	10.7	10.4	11.0	10.3	8.8	95.1	89.6	-1.8%
Bonuses	141.8	58.3	47.8	58.8	32.1	7.8	1.8	0.6	0.8	0.9	0.0	1.2	26.0	12.8	-50.8%
Rentals	46.4	53.7	27.7	21.2	20.9	3.8	1.4	1.2	1.4	0.5	0.5	1.3	15.8	10.3	-34.8%
Royalties	414.7	462.7	444.6	436.1	379.1	84.8	27.7	22.9	21.0	21.2	21.2	19.3	284.9	248.8	-15.8%
Special Fuels Tax	24.7	25.5	27.1	41.1	52.3	17.0	4.0	4.8	3.8	3.5	4.4	3.8	40.5	43.5	7.4%
Gasoline Tax	185.6	182.3	181.8	227.7	208.2	79.1	21.2	24.4	24.7	22.8	18.7	21.8	224.8	213.2	-5.0%
Nat. Gas Franchise Tax	7.8	9.8	12.5	11.7	11.0	2.0	0.8	1.8	0.7	0.8	1.4	0.4	8.7	8.8	-1.1%
Total Energy Revenues	1798.3	1717.4	1617.0	1698.8	1680.9	391.3	99.8	94.8	88.1	106.8	82.4	78.8	1164.8	940.3	-19.3%
TOTAL STATE REVENUES (Millions $)	3462.8	3969.9	3775.8	3795.8	4338.8	575.6	338.1	478.8	348.0	389.8	284.9	386.3	3332.8	2974.5	-10.7%
ENERGY RELATED REVENUES AS % OF STATE TOTAL	51.4	43.3	40.2	42.0	34.8	40.1	30.4	20.2	27.2	34.5	31.1	25.5	35.0	31.8	-9.0%
GROSS NAT. PROD. (Billions $)	2987.7	3066.5	3210.5	3774.7	3889.1	4149.8	4175.8	4175.8	4175.8	4234.3	4234.3	4234.3	3995.0	4186.4	5.8%
PROD. PRICE INDEX - U	285.4	296.8	308.1	310.3	306.7	304.3	297.8	299.2	298.9	297.7	297.2	297.7	308.8	300.2	-2.7%
CONS. PRICE INDEX - U	272.4	286.1	298.4	311.1	322.2	327.5	325.3	326.3	327.9	328.0	328.6	330.2	320.8	327.6	2.1%
CPI - ENERGY - U	410.0	416.1	415.8	426.6	426.8	405.8	391.6	387.0	380.6	388.6	358.6	358.6	426.6	378.8	-11.1%

U = Unadjusted p = Revised e = Estimated

2/24/87 U2730-1

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University

Winter 1987

LOUISIANA'S RESIDENTIAL ELECTRIC UTILITIES

Roberta A. Scull
Director, Information Services

Our local media keep us informed of the drama surrounding rate hearings before the Louisiana Public Service Commission (PSC). These media presentations regarding such hearings appear to be designed for sensation not education. This brief presentation is an attempt to educate the public regarding Louisiana's residential utility rate structure.

Next to children, grandchildren, and pets the monthly utility bill is one of the most commonly and sometimes hotly discussed topics in Louisiana. Some boast about this month's low bill while others console each other about high bills. Lately most of us have been surprised by *smaller* electric and natural gas utility bills. This recent drop results from the fact that natural gas prices have dropped significantly over the past year, thereby favorably affecting the fuel adjustment charge on bills. In fact, the December 1986 fuel adjustment charge for most Louisiana utilities is 33% less than that of December 1985.

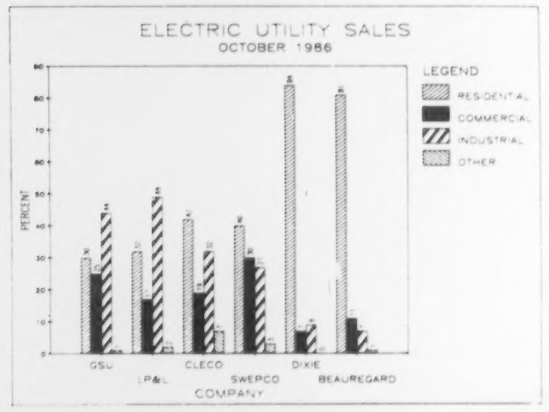
Consumers Want Low and Stable Rates

Conversely, if natural gas prices rise, consumers will be faced with higher utility bills. It is that fear of rising costs which alarms most residential consumers because they want both low and stable electric rates. Consumers also want to feel reasonably sure that their cost (rate) per KWH of electricity consumed will be comparable to that of other rate payers in the state and that those rates will remain rather stable in terms of constant dollars.

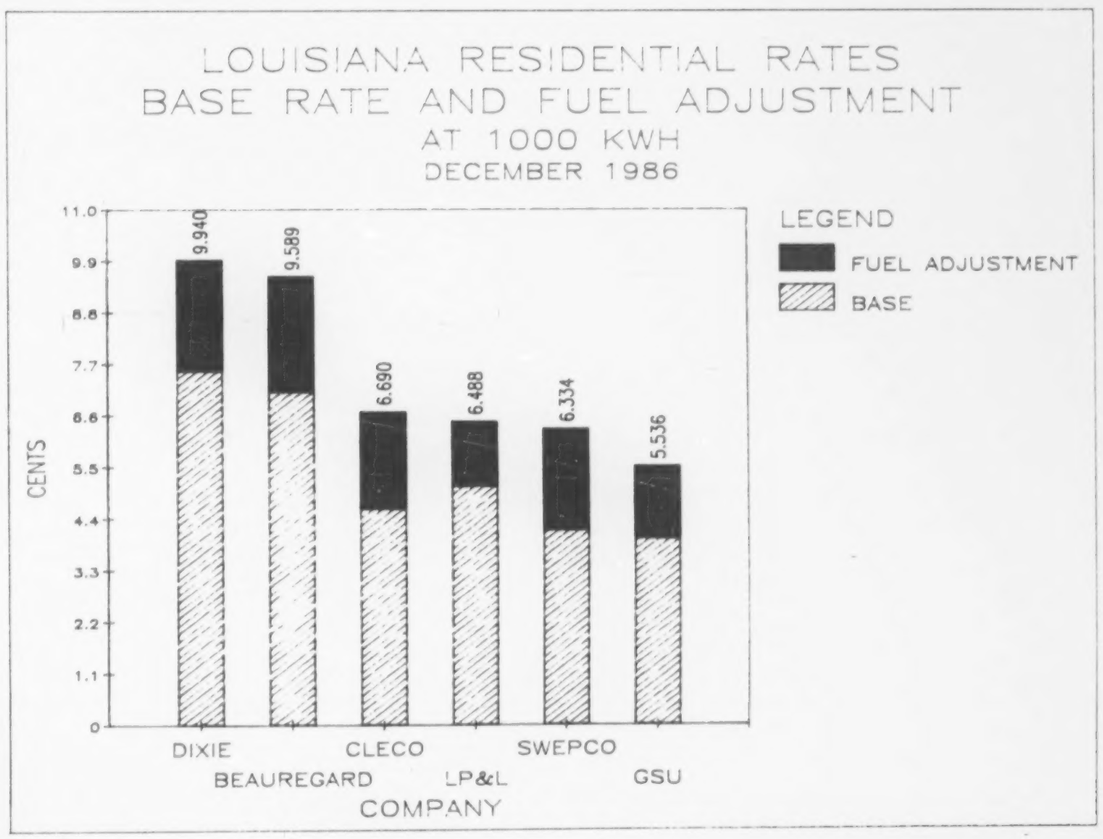
For comparison purposes, the following shows the December residential rate structure for those utilities which report to the PSC.

One might wonder why there is such a discrepancy between GSU and Dixie rates. There are several factors. The primary one is that it is cheaper for the utility and the customers that utility serves to have a number of large volume users, such as industrial customers, in its service areas. Serving residential customers is expensive because of all the overhead involved in just providing that first watt to a customer.

In providing electricity to a residential or industrial customer, the unit cost goes down as the volume used rises.

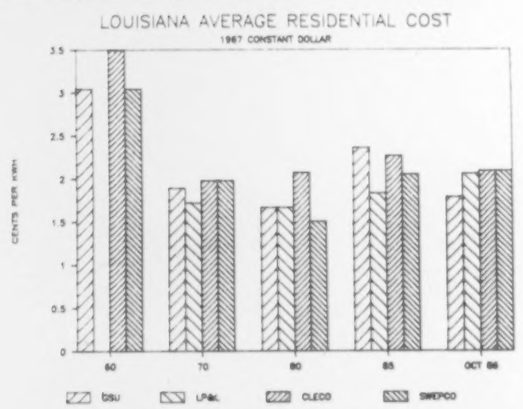


As seen above, Beauregard and Dixie serve primarily residential users who have a small KWH demand per billing (customer) unit . . . thus higher cost per KWH. The correlation between low residential rates and the volume of power supplied to large KWH volume industrial and commercial consumers is apparent. As a result, consumers of a rural electric cooperative which serves primarily residential consumers will almost always pay more for their electricity simply because the unit cost to provide them with power is greater.



Comparing Rates

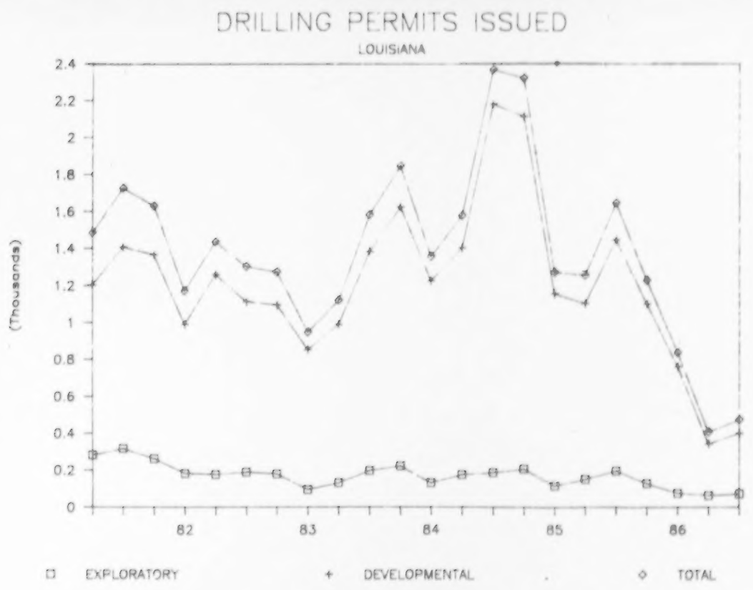
Another frequent concern is the consumer perception that electric utility rates are higher than ever. On the contrary, **utilities are a bargain compared to years past.** The following shows how much the major PSC regulated utility residential consumers historically have paid for electricity in today's dollars.

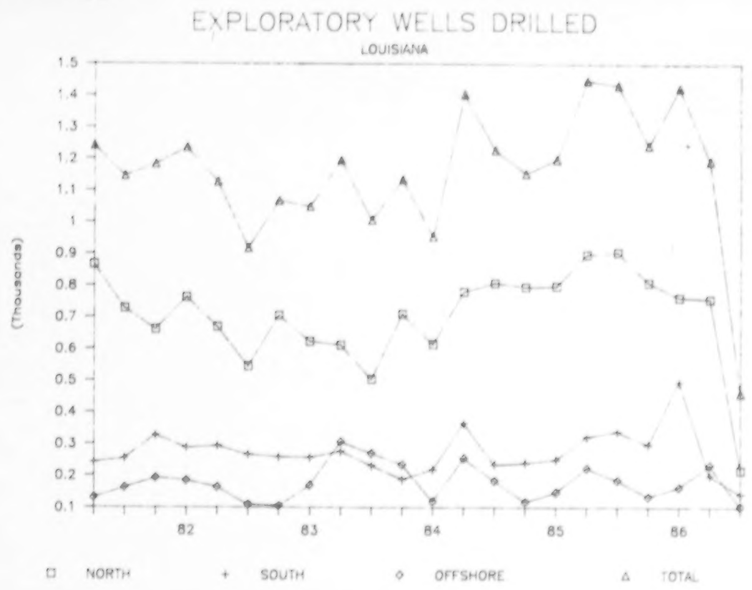


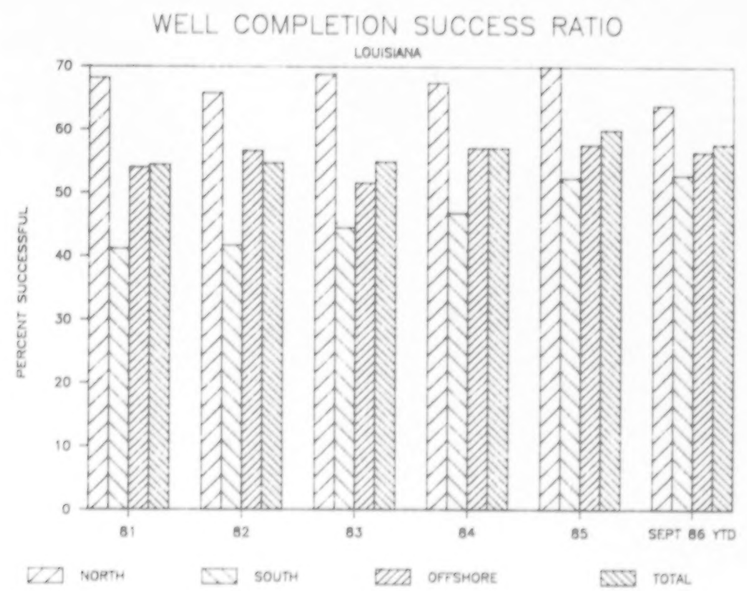
Not only have Louisiana utility rates remained stable, they have actually gone down in relation

(Continued on back)

Historical Presentation—Drilling







Figures represent TOTAL except when otherwise noted

Totals may not add due to rounding

Indicator	80.4	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3
DRILLING PERMITS ISSUED												
Exploratory	263	223	282	318	263	182	176	189	180	95	131	197
Developmental	1399	1217	1204	1408	1366	988	1260	1113	1093	852	988	1384
Total	1662	1440	1486	1726	1629	1170	1436	1302	1273	947	1119	1581
EXPLORATORY WELLS DRILLED - TOTAL*												
North	781	758	867	728	661	763	869	544	705	623	612	504
South	256	285	243	255	328	288	294	266	259	257	277	232
Offshore (Incl. Fed. Water)	68	88	131	162	193	184	164	108	104	169	307	271
Total	1105	1131	1241	1145	1182	1235	1127	918	1068	1049	1196	1007
WELL COMPLETION SUCCESS RATIO* (Percent)												
North	0.69	0.72	0.75	0.64	0.62	0.70	0.64	0.64	0.65	0.75	0.67	0.70
South	0.52	0.42	0.40	0.37	0.48	0.40	0.41	0.41	0.45	0.44	0.44	0.48
Offshore (Incl. Fed. Water)	0.39	0.32	0.60	0.72	0.52	0.67	0.66	0.47	0.47	0.54	0.54	0.38
Total	0.53	0.49	0.58	0.58	0.53	0.59	0.57	0.52	0.52	0.55	0.55	0.52

Indicator	83.4	84.1	84.2	84.3	84.4	85.1	85.2	85.3	85.4	86.1	86.2	86.3
DRILLING PERMITS ISSUED												
Exploratory	222	131	176	187	208	116	154	200	129	76	84	72
Developmental	1625	1225	1403	2184	2117	1157	1104	1449	1101	763	344	402
Total	1847	1356	1579	2371	2325	1273	1258	1649	1230	839	428	474
EXPLORATORY WELLS DRILLED - TOTAL*												
North	710	615	781	809	796	799	900	908	812	765	759	217
South	189	220	367	235	241	252	324	341	298	498	201	142
Offshore (Incl. Fed. Water)	235	119	256	184	117	148	225	186	134	164	234	102
Total	1134	954	1404	1228	1154	1199	1449	1435	1244	1427	1194	461
WELL COMPLETION SUCCESS RATIO* (Percent)												
North	0.64	0.63	0.75	0.68	0.66	0.69	0.73	0.71	0.67	0.73	0.77	0.42
South	0.42	0.48	0.45	0.47	0.47	0.49	0.52	0.55	0.54	0.57	0.53	0.49
Offshore (Incl. Fed. Water)	0.60	0.48	0.60	0.67	0.54	0.55	0.64	0.65	0.48	0.55	0.66	0.49
Total	0.65	0.53	0.60	0.60	0.56	0.58	0.63	0.64	0.58	0.62	0.65	0.48

* Source: Petroleum Information Corporation

(Continued from front)

to the actual buying power of the dollar. This simply means that Louisiana residential consumers today are paying about the same for electricity as they paid in 1970 and less than 1960.

Pending Rate Increases

All of this good news about how well off we are diminishes when discussions of higher rates arise. Indeed, one of the most hotly contested topics on the Louisiana utility scene today is the $100 million emergency rate increase being requested by Gulf States Utilities (GSU).

What would such a rate increase actually mean to GSU's average residential consumer? Based on the December residential rate of 5.54 cents at 1000 KWH and assuming stable fuel adjustment charges, most GSU residential customers would be paying 6.42 cents per KWH, still one of lower regulated rates in the state.

Louisiana Rates Are Favorable

Sometimes it is wise to get outside our own microcosm and look at how Louisiana compares to other states. Trying to compare Louisiana rates with those of other states, especially for a particular month, is a little difficult because many states have a seasonal rate structure. For example, at the 1000 KWH level Georgia Power Co. has a residential base rate per KWH, excluding fuel adjustment charges, of 6.583 cents from June through September. From October to May the same base rate drops to 3.283 cents.

The following shows Winter 1986 month rates for representative publicly held utilities within the region.

Residential Rates at 1000 KWH, Including Fuel Adjustment Winter 1986

Company	Cents per KWH
Georgia Power Company	5.1*
Kentucky Utilities	5.1*
Gulf States Utilities (LA)	5.5
Texas Utilities Electric	6.2*
Louisiana Power and Light	6.5
Houston Lighting and Power	7.8

*Seasonally adjusted lower winter rates

As the old saying goes, "A picture is worth a thousand words." According to the date presented here, most residential customers in Louisiana pay prices comparable to or less than those in similar locales.

All in all, the majority of residential consumers in Louisiana have reasonable and stable electric utility rates. Guess we have something to cheer about!

Footnote: All date presented for Louisiana is from the Louisiana Public Service Commission.

Figures have been rounded for ease of presentation.

FOOTNOTES

1. Industrial Sale Price by Major Pipeline Companies.
2. Intrastate price is computed as the weighted average price charged by Louisiana Instrastate, Monterey, and Acadian gas transmission companies. Due to questionable figures, Acadian gas is not figured in the 1985 3rd quarter price.

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Taxes and Revenues

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SRI Acquisitions
Congressional Informa. Ser.
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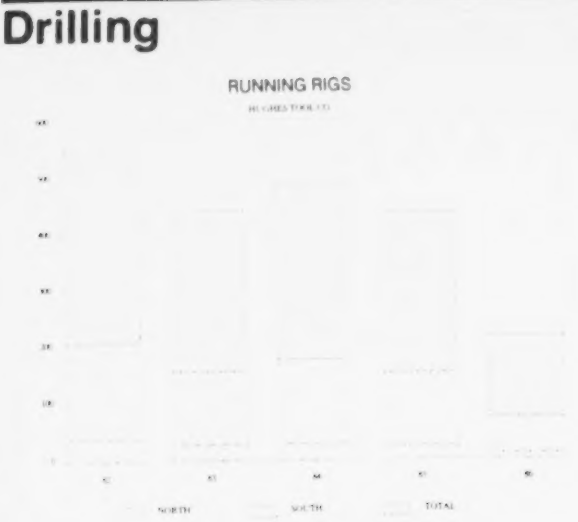
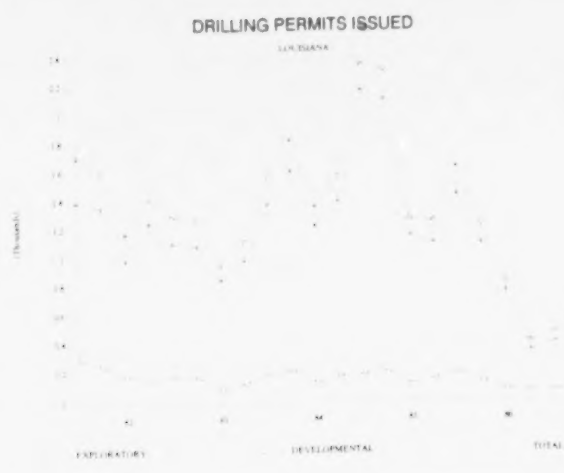
Drilling





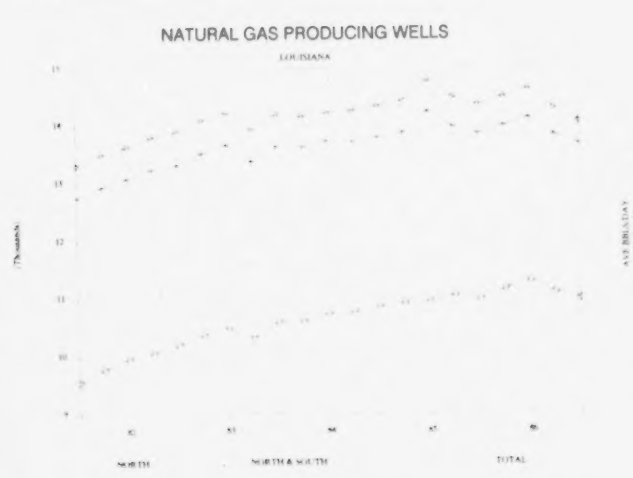
Figures represent TOTAL
except when otherwise noted

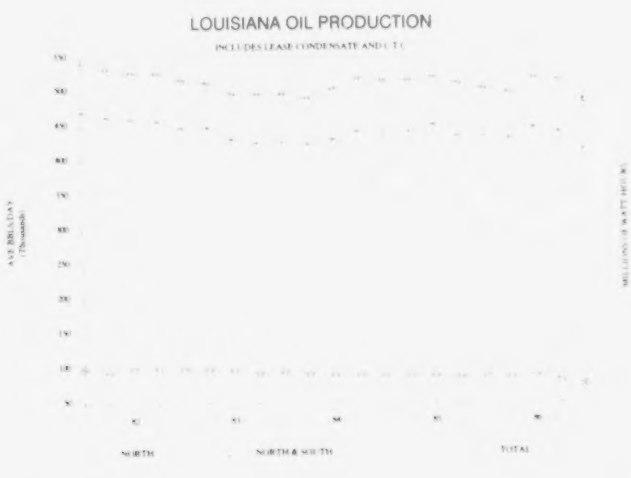
Totals may not add due to rounding

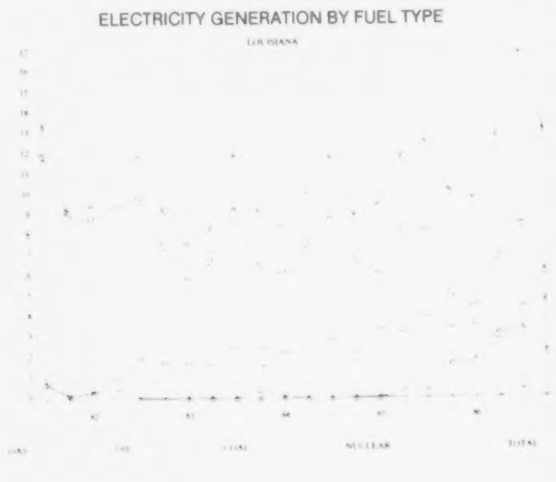
Indicator	1981	1982	1983	1984	1985	86.1	86.2	86.3	Oct	Nov	Dec	Year to Date Through Last Month Reported Dec 1985	Dec 1986	% Change
EXPLORATORY WELLS - LA.*														
(As reported)														
Oil	77	60	66	59	62	15	10	6	2	1	1	62	35	-43.5%
Gas	171	151	97	82	100	23	20	15	4	4	2	100	68	-32.0%
Dry	997	855	821	704	665	159	97	101	32	24	21	665	434	-34.7%
DEVELOPMENTAL WELLS - LA.*														
(As reported)														
Oil	1483	1469	1950	2361	2712	652	629	169	84	47	25	2712	1604	-40.9%
Gas	1711	1416	1011	932	1145	259	294	82	71	28	34	1145	768	-32.9%
Dry	1251	1287	1219	1453	1433	347	263	238	82	66	24	1433	1000	-30.2%
WELL COMPLETIONS - LA.*														
(As reported)														
North	3590	3208	2878	3667	4038	758	845	352	153	78	30	4038	2214	-45.2%
South	1471	1400	1193	1248	1325	523	221	145	62	53	35	1325	1039	-21.6%
Offshore (Incl. fed. water)	629	637	1094	736	754	176	246	106	40	39	23	754	630	-16.4%
Total	5690	5243	5165	5651	6117	1455	1312	603	255	170	88	6117	3883	-36.5%
RUNNING RIGS (Ave. Hughes Tool)														
North	58	40	29	30	25	17	7	12	12	12	9	25	12	-52.0%
South	244	188	128	147	129	98	55	47	57	45	55	129	63	-51.2%
Offshore (Federal)	154	137	125	132	129	107	60	51	59	51	59	129	69	-46.5%
Total	456	345	283	310	283	219	122	110	127	115	125	283	143	-49.5%
DRILLING PERMITS ISSUED														
Exploratory	1086	727	645	702	599	76	64	72	174	22	36	599	240	-59.9%
Developmental	5195	4454	4849	6929	4811	783	344	402	28	124	176	4811	1683	-65.0%
Total	6281	5181	5494	7631	5410	839	408	474	202	146	212	5410	1923	-64.5%

*Source: Petroleum Information Corporation. Well data after August includes workovers. CES maintains additional data in the Indicators Database.

Production





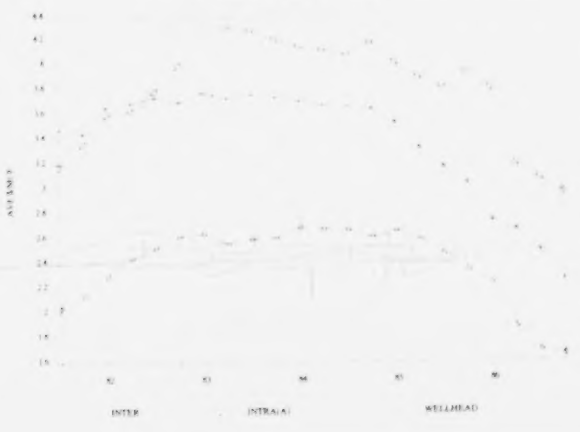


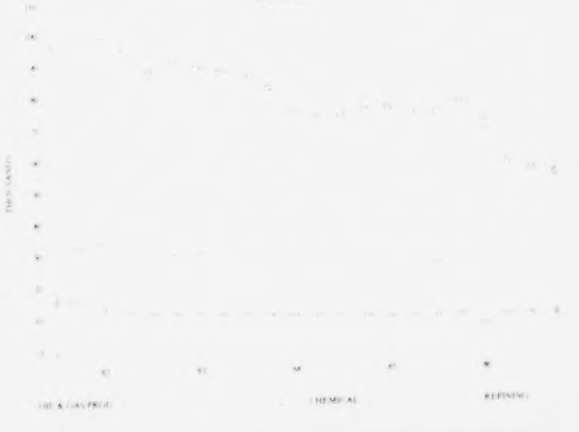
Figures represent TOTAL
except when otherwise noted

Totals may not add due to rounding

Indicator	1981	1982	1983	1984	1985	86.1	86.2	86.3	Oct	Nov	Dec	Year to Date Through Last Month Reported 1985	1986	% Change
NATURAL GAS PRODUCING WELLS														
North	9479	10154	10502	10812	11026	11298	11085	10964	10807	NA	NA	11002	11084	0.7%
South	3226	3138	3065	2955	2976	2816	2726	2683	2675	NA	NA	3007	2735	-9.0%
Offshore	557	564	549	532	511	508	467	388	394	NA	NA	513	448	-12.7%
Total	13262	13855	14116	14299	14513	14620	14278	14035	13876	NA	NA	14522	14268	-1.7%
CRUDE OIL PRODUCING WELLS														
North	15084	15540	16299	17544	18792	19747	19501	19097	18987	NA	NA	18781	19402	3.3%
South	6777	6608	6374	6241	6278	6215	6112	5940	5996	NA	NA	6290	6080	-3.3%
Offshore	1105	1112	1037	1030	996	1023	994	999	1010	NA	NA	996	1006	1.0%
Total	22966	23259	23710	24815	26066	26985	26607	26036	25993	NA	NA	26067	26488	1.6%
PRODUCING WELLS ABANDONED	1010	1255	1043	1174	1826	684	460	684	261	73	NA	1826	2162	18.4%
NATURAL GAS MARKETED PROD. (Total BCF)	6780	6131	5332	5640	5159	1326	1161	1159	385	388	482	5159	4903	-5.0%
CRUDE OIL PRODUCTION (Incl. lease condensate and C.T.C.) (Barrels/day)														
North	91	98	95	91	88	80	78	83	85	90	76	88	81	-8.0%
South	1168	1185	1199	1286	1341	1309	1239	1270	1300	1291	1280	1341	1277	-4.8%
Total	1258	1282	1294	1377	1428	1390	1318	1353	1385	1371	1356	1428	1358	-4.8%
COAL LIGNITE PRODUCTION (Thousand short tons)						552	639	600	193	140	93	198	2217	1031.1%
CRUDE OIL STOCK - E.O.M. Ave. (MMBBLS)	14.2	12.8	13.3	13.4	13.4	12.3	12.8	14.5	14.7	NA	NA	13.5	13.3	-1.5%
ELECTRICITY PRODUCTION (GWH)														
Gas Generated	38848	35584	26311	29366	27735	4393	6834	8688	2357	1877	1798	27735	28035	-6.1%
Oil Generated	2635	940	356	140	100	8	1	3	3	3	3	100	419	319.0%
Coal Generated	1528	4998	8377	9830	13868	3555	865	794	1633	1625	1496	13988	15587	11.8%
Nuclear Generated	0	0	0	0	2458	1825	879	1208	779	932	508	2458	10645	333.1%
Total Generated	44111	41532	37044	39330	44261	9781	8579	10693	4772	4537	3790	44261	52686	19.0%
**1 GWh = 1 Million KWh														

Prices & Employment





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Totals may not add due to rounding

Indicator	1981	1982	1983	1984	1985	86.1	86.2	86.3	Oct	Nov	Dec	Year to Date Through Last Month Reported Dec 1985	1986	% Change
ELEC. PRICES (Cents/KWH) - Ave.														
Industrial														
CLECO	4.6	5.3	5.7	5.8	4.5	4.4	3.8	4.1	4.1	4.3	4.3	4.8	4.2	-8.7%
GSU	3.2	3.5	3.7	3.8	5.1	4.7	4.5	4.2	4.8	4.1	3.5	5.1	4.3	-15.7%
LP&L	4.0	4.4	4.6	4.6	4.2	4.4	4.1	4.2	4.2	3.7	4.0	4.2	4.2	0.0%
SWEPCO	2.9	3.8	4.6	4.8	5.2	5.2	5.4	5.1	5.2	4.9	5.1	5.2	5.2	0.0%
WELLHEAD PRICE OF OIL ($/BBL) - Ave.														
Louisiana	35.54	32.45	30.02	29.67	27.23	20.71	13.57	12.03	13.78	13.74	14.35	27.57	15.29	-44.5%
U.S.	31.80	28.54	25.13	25.09	24.09	18.00	10.86	10.17	11.10	11.15	11.82	24.30	12.60	-48.1%
NAT. GAS PRICES-[$/MCF]-Ave.														
Wellhead - U.S.	1.98	2.47	2.59	2.66	2.51	2.12	1.73	1.55	1.52	1.65	1.64	2.51	1.87	-25.5%
Interstate Indst. Sales [1]	3.13	3.75	4.26	4.12	3.91	3.80	3.19	3.06	2.83	2.71	3.30	3.91	3.38	-13.6%
La. Intrastate [2]	3.38	3.69	3.74	3.67	3.26	2.73	2.65	2.48	2.11	2.28	3.05	3.03	2.53	-16.5%
EMPLOYMENT (Thousands) - Ave.														
Oil and Gas Production (SIC13)	94.7	94.4	88.0	75.6	77.1	73.7	59.4	57.6	54.3	57.6	55.8	77.1	61.6	-20.1%
Chemicals and Allied Products (SIC28)	32.7	33.6	30.9	28.9	28.0	26.7	26.5	26.3	25.9	26.0	25.4	28.0	26.3	-6.1%
Petroleum Refining (SIC29)	15.3	13.2	12.4	11.6	11.1	8.1	11.4	11.5	11.4	11.4	11.6	11.1	10.6	-4.5%
Total Louisiana Employment	1698.0	1678.4	1657.0	1751.9	1744.2	1722.7	1725.4	1736.6	1727.9	1708.2	1698.5	1744.2	1723.9	-1.2%
GROSS NAT. PROD. [Billions $]	2937.7	3066.5	3310.5	3774.7	3989.1	4149.2	4175.6	4240.7	4268.4	4268.4	4268.4	3989.1	4197.7	5.2%
PROD. PRICE INDEX - U	293.4	289.3	303.1	310.3	308.7	304.5	298.7	297.4	298.3	298.7	298.1	308.7	299.8	-2.9%
CONS. PRICE INDEX - U	272.4	280.1	298.4	311.1	322.2	327.3	326.5	328.9	330.5	330.8	331.1	322.2	328.4	1.9%
CPI - ENERGY - U	410.0	416.1	419.3	423.6	426.5	405.8	370.0	361.9	348.6	341.7	342.4	426.5	370.3	-13.2%

U = Unadjusted

1. Industrial Sale Price by Major Pipeline Companies.
2. Intrastate price is computed as the weighted average price charged by Louisiana Instrstate, Monterey, and Acadian gas transmission companies. Due to questionable figures, Acadian gas is not figured in the 1985 3rd quarter price.

6/17/87 U2730-1

Louisiana Energy Indicators

Center for Energy Studies

Louisiana State University

Spring 1987

TAXING OIL AND GAS IN LOUISIANA

James A. Richardson

Director, Public Administration Institute and Professor of Economics

Louisiana State University

As with most states generously endowed with natural resources, Louisiana has relied on mineral revenues to support public expenditures. This dependence on mineral revenues allowed the State to maintain low property and income taxes compared to other states and, at the same time, to provide a high level of public expenditures—at least up to the mid-1980s. The precipitous decline in energy prices in the 1980's has automatically impaired the ability of any energy state to rely on mineral revenues and has also forced the oil and gas producing states to re-examine the taxation and budgeting of mineral revenues. Louisiana must re-examine its taxation and use of mineral revenues in order to protect the stability and integrity of its budget process and to provide for a fair intergenerational distribution of its depletable wealth.

Severance Taxes and Budgetary Stability

The severance tax on oil and gas has been a major source of funds for state government for the past thirty years—that is. at least up to fiscal year 1987. The impact of the severance tax on the state's budget has varied, depending upon price and production parameters and the imposition and growth of other tax sources. Oil and gas severance taxes as a percent of total taxes and revenues are illustrated in the following table.

BUDGETARY SIGNIFICANCE OF THE SEVERANCE TAX

Fiscal year	Percent of Total Taxes and Revenues
1976	27.4
1977	24.7
1978	20.3
1979	18.4
1980	16.7
1981	23.0
1982	24.4
1983	22.4
1984	20.8
1985	17.1
1986	16.0
1987*	11.4

*Estimated

In addition to severance taxes, Louisiana also receives mineral revenues in the form of royalties from oil and gas production on state-owned land and waterbottoms, as well as bonuses and rental payments. Royalties accrue as production occurs. Bonuses represent up-front money for the right to drill and rental payments represent payments to the state if drilling has not started within a contractually designated period of time.

In fiscal 1973, Louisiana received just over $400 million from severance taxes and royalties, bonuses, and rental payments from state-owned land and waterbottoms. In fiscal 1982, revenues from these sources peaked at just over $1,600 million, representing a 300 percent increase in less than ten years. Louisiana will collect around $730 million from these mineral revenues in fiscal 1987. This represents a 55 percent decline from fiscal 1982 or, more to the point, a loss of almost $900 million that has to be replaced by spending cuts and/or new taxes.

This budgetary volatility is related almost completely to the price of oil. Oil is taxed at 12.5 percent of the value of oil at the wellhead. The value of oil is equal to the amount of oil produced multiplied by the price of oil. Production is predictable, though not constant. The price of oil has gone from $3 per barrel in the early 1970s to as high as $38 per barrel in the early 1980s; it is now back to the mid-teens in early 1987. The severance tax on oil has caused the wide swings in total severance tax collections. The severance tax on natural gas has steadily declined from 1971 since natural gas production in Louisiana's taxing jurisdiction has declined and since natural gas is taxed at 7 cents per thousand cubic feet.

Royalties, bonuses, and rental payments undergo the same cycles as oil severance tax collections. In fiscal 1973 Louisiana collected $140 million from royalties, bonuses, and rentals; while in fiscal 1982 the State collected over $650 million from these sources. In fiscal 1987 Louisiana is expected to collect only $250 million from these sources. The State has lost $400 million that have to be replaced by spending cuts or new taxes.

Will the Volatility Disappear?

No one can predict the price of oil for the next twelve months, let alone the next ten years. The price of oil could be stable for ten years, or it could fall and then rise or rise and then fall. **State government cannot guarantee any level of public services or predictable tax rates as long as mineral revenues are a major contributor to the funding of recurring expenditures.**

In 1985 the U.S. Department of Energy (DOE) estimated that oil prices in 1986 would be in the $22 to $28 per barrel range and that oil prices in 1995 would be in the $44 to $61 per barrel range. The 1985 assumptions for 1986 oil prices are wrong, but, even if oil prices had ended up somewhere between $22 and $28 per barrel, the range of oil price possibilities makes budgeting very difficult. If the state had used $28 per barrel as its oil price estimate, and the oil price turned out to be $22 per barrel, then the State would be looking at a $150 million shortfall from mineral revenues.

A look at U.S. Department of Energy oil price estimates reveals the "softness" of their estimates. In 1983, DOE assumed that 1995 oil prices would be in the $70 to $125 per barrel range. DOE's low price assumption in 1983 ($70 per barrel) exceeded the high price assumption in 1985 ($61 per barrel).

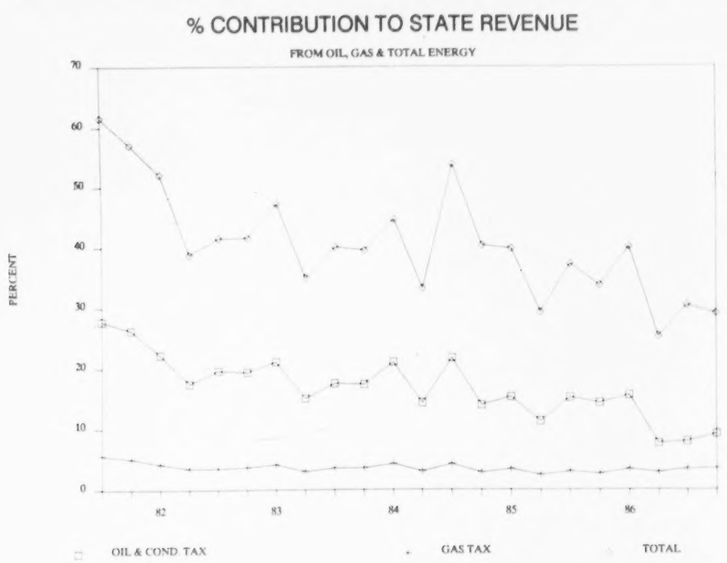
Oil price stability may be just around the corner, but no one can guarantee it. Hence, state government has to recognize the potential budgetary instability as long as mineral revenues are a primary source of funding for the state's operating budget.

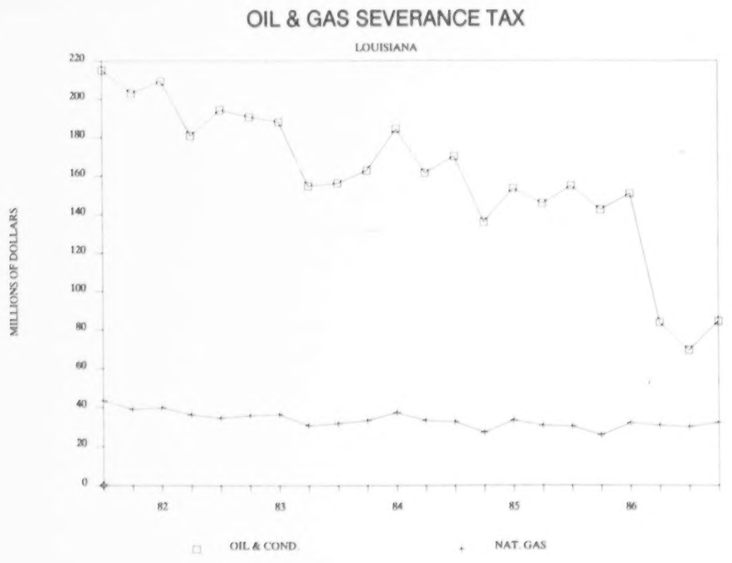
Louisiana's Alternatives

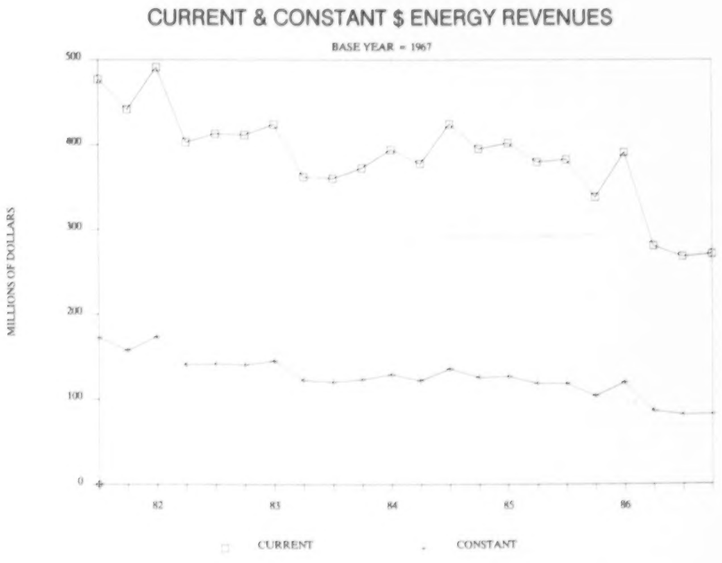
Louisiana has four alternatives. **First,** it can keep the present taxation of mineral revenues and continue to use these revenues for recurring expenditures. The state will take its chances that mineral revenues will not be as volatile in the future as they have been in the past. This al-

(Continued on back)

Historical Presentation—Revenues







Figures represent TOTAL
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Indicator	81.1	81.2	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3	83.4
PRINCIPAL ENERGY RELATED REVENUES (Millions $)												
Sev. - Oil & Condensate	166.65	230.38	215.15	203.11	209.65	181.35	194.67	191.13	188.52	155.38	156.89	163.32
Sev. - Natural Gas	40.84	40.65	43.51	39.22	40.16	36.51	34.78	36.05	36.59	31.88	31.88	33.34
Bonuses	43.22	25.05	40.04	33.31	22.37	14.81	11.63	10.44	10.54	14.05	14.05	12.68
Rentals	11.19	10.53	11.25	13.40	15.31	14.12	12.30	11.91	10.44	7.38	4.41	5.48
Royalties	84.76	110.58	120.69	98.82	153.96	105.58	110.42	112.74	130.98	105.53	102.72	105.64
Special Fuels Tax	5.68	6.29	5.99	6.76	6.08	6.55	6.30	6.57	6.05	7.07	6.93	7.05
Gasoline Tax	40.66	41.21	38.69	45.02	40.13	41.25	40.81	40.09	36.68	42.16	40.33	41.78
Nat. Gas Franchise Tax	1.89	2.70	1.60	1.55	2.39	2.77	2.10	2.34	3.30	3.65	2.85	2.71
Total Energy Revenues	395.87	467.70	477.19	441.49	490.98	403.20	413.29	411.87	424.13	362.15	360.33	372.88
TOTAL STATE REVENUES (Millions $)	860.07	1054.40	774.81	773.01	943.28	1040.39	994.86	990.75	897.13	1036.86	898.13	942.81
ENERGY RELATED REVENUES AS % OF STATE TOTAL	46.0	44.4	61.6	57.1	52.1	38.8	41.5	41.6	47.3	34.9	40.1	39.5

Indicator	84.1	84.2	84.3	84.4	85.1	85.2	85.3	85.4	86.1	86.2	86.3	86.4
PRINCIPAL ENERGY RELATED REVENUES (Millions $)												
Sev. - Oil & Condensate	184.80	161.81	170.53	141.30	154.02	146.05	155.37	142.85	151.30	84.30	69.89	84.84
Sev. - Natural Gas	37.56	33.54	32.83	27.36	33.70	30.96	30.49	26.00	32.26	31.07	30.24	32.56
Bonuses	12.32	13.25	23.10	19.29	11.56	5.57	8.92	6.04	7.83	3.01	1.98	3.07
Rentals	4.18	7.12	5.71	4.19	4.15	6.74	4.95	5.01	3.94	4.00	2.37	1.95
Royalties	106.08	10.51	108.65	112.35	104.01	97.35	93.54	84.18	94.62	71.16	83.15	55.57
Special Fuels Tax	7.09	7.94	11.59	14.43	13.17	13.66	13.62	11.80	16.98	12.67	13.80	14.16
Gasoline Tax	38.68	41.79	68.71	78.51	77.49	75.80	71.34	61.54	79.10	70.33	63.89	76.14
Nat. Gas Franchise Tax	3.03	3.02	3.14	2.51	3.01	3.25	2.40	2.38	3.00	3.16	2.43	2.30
Total Energy Revenues	394.71	375.57	424.59	400.70	402.31	379.66	382.85	338.08	391.33	280.77	268.16	271.30
TOTAL STATE REVENUES (Millions $)	881.80	1137.56	787.64	978.21	1008.36	1297.82	1026.03	1003.38	975.60	1114.90	884.05	938.69
ENERGY RELATED REVENUES AS % OF STATE TOTAL	44.8	33.0	53.9	41.0	39.9	29.3	37.3	33.7	40.1	25.2	30.3	28.9

(Continued from front)

ternative suggests a boom and bust risk.

Second, the state could merely stop taxing oil and gas; and then the budget would not be vulnerable to the swings in oil and gas prices and production. But the State should not surrender the taxation of oil and gas merely to avoid budget instability. Oil and gas wealth represents a reasonable tax base—every state with deposits of oil and gas, taxes oil and gas production or, in some instances, oil and gas reserves.

Third, Louisiana could tax oil on a per unit basis, just as it now taxes natural gas. Oil production is not erratic, so state revenues based on oil production will not be erratic. With this approach, the State would surrender a legitimate part of the tax base in order to avoid budgetary instability or the state would continuously be considering different per unit tax rates, especially if the price of oil rises substantially. Budgetary instability would be replaced by tax rate instability.

Almost all major oil- and gas-producing states tax oil and gas on a value basis. Louisiana taxes natural gas on a per unit basis because of (1) the constitutional requirement that natural gas be taxed at the well head; but natural gas is not typically sold at the wellhead. As a result, no market value is established until some transporting and processing have been done and (2) federal regulations have been imposed on natural gas pricing. The State, however, does not have to tax oil and gas production on a per unit basis in order to avoid budgetary instability.

Finally, **Louisiana could budget its mineral revenues differently. The state could allocate the mineral revenues between recurring and non-recurring expenditures. In 1979 Louisiana enacted an Enhanced Mineral Trust Fund. The concept was good in 1979; it is even better in 1987. This method of taxing and using mineral revenues allows the State to tax the mineral wealth within its taxing jurisdiction and yet not allow the entire State budget to be vulnerable to the volatility of energy prices.**

An Appropriate Allocation of Mineral Revenues

What portion of the mineral revenues should be used in the operating budget? There is no magic answer; however, an allocation of mineral revenues to recurring expenditures based on $12 oil appears most prudent. Based on current oil and gas production, $580 million of severance taxes plus royalties, bonuses, and rentals would be allocated to recurring expenditures. Oil prices may fall below $12, but they cannot be expected to stay below $12 for any sustained perid of time, because the long-run replacement cost of a barrel of oil consumed is higher than $12 per barrel.

The $580 million base would change from year to year according to the (1) rate of change of energy prices, (2) Louisiana energy production, and (3) the U.S. inflation rate. The change in the $580 million base would equal the rate of change of oil prices plus the rate of change of oil production, assuming oil prices rose less rapidly than inflation. Otherwise, the base would change by the rate of U.S. inflation plus the rate of Louisiana oil production.

Limiting the growth of the $580 million base to the lower of the growth of oil prices or general prices maintains the stability required for the budgetary process. In addition, including production growth or decline rates in the calculation of the changes in the $580 million base takes into account the depletability of oil and gas resources.

Any revenues above the $580 million in fiscal 1987 or above the recalculated base in other fiscal years would be used only for non-recurring purposes, such as repayment of the accumulating unemployment insurance debt; retirement of some of the State's bonded indebtedness; funding the State's unfunded accrued pension liability; or creating a Permanent Trust Fund.

Concluding Comments

An appropriate allocation of mineral revenues between recurring and non-recurring purposes is an essential first step in reforming Louisiana's fiscal structure. Other reforms will be sabotaged by the potential volatility of the tax structure if mineral revenues are not appropriately budgeted.

Representative Claude Leach and Senator Ben Bagert recently introduced separate, but similar, constitutional amendments to ensure that wide fluctuations in mineral revenues will not cause budgetary instability in the future. They also want to ensure that the mineral revenues are shared with future generations. This type of proposed amendment deserves the careful and immediate attention of the Governor and Legislature.

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Intrastate Natural Gas Prices

Petroleum Information Corporation. (Unpublished data.)
Wells completed
Wells abandoned

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Louisiana Energy Indicators is published quarterly by the Center for Energy Studies, Louisiana State University, E. Fraternity Circle, Baton Rouge, LA 70803-0301, (504) 388-4400. For address corrections, please return mailing label to CES with changes. For continued receipt of this and other CES publications, notify Barbara Kavanaugh at the CES address.

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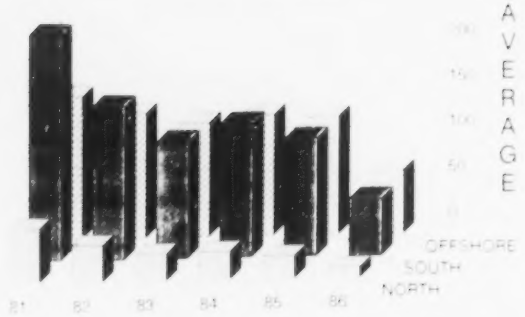
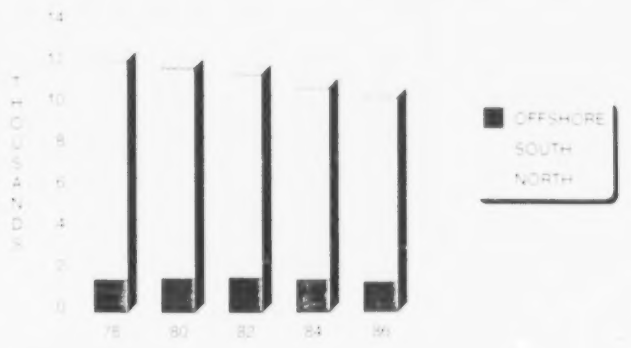
Drilling

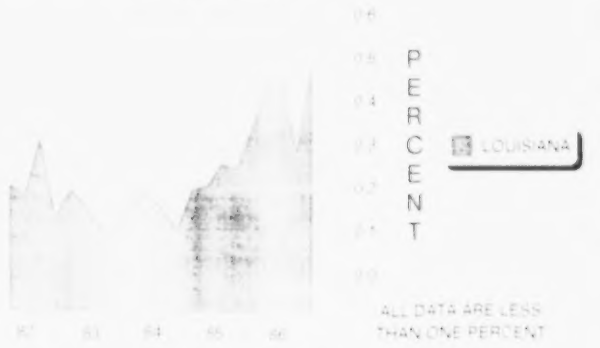
RUNNING RIGS
HUGHES TOOL CO.



CRUDE AND GAS PRODUCING WELLS



PERCENT OF PRODUCING WELLS ABANDONED



Figures represent TOTAL except when otherwise noted

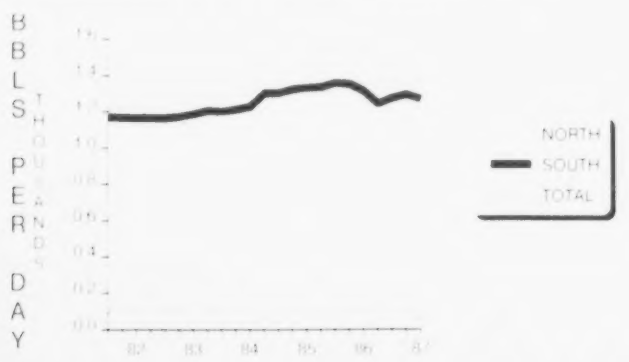
Totals may not add due to rounding

Indicator	1982	1983	1984	1985	1986	86.2	86.3	86.4	Jan	Feb	Mar	Year to Date Through Last Month Reported Mar 1986	Year to Date Through Last Month Reported Mar 1987	% Change
RUNNING RIGS - Avg. (Hughes Tool)														
North	40	29	30	25	12	7	12	11	12	12	11	17	12	-29.4%
South	168	128	147	129	63	55	47	52	60	52	46	96	53	-44.8%
Offshore (Federal)	137	125	132	129	69	60	51	59	58	48	48	107	51	-52.3%
Total	345	282	309	283	143	122	110	122	129	112	105	219	115	-47.5%
OIL WELLS COMPLETED*														
North	1122	1393	1792	2139	1092	491	90	82	36	24	19	429	79	-81.6%
South	275	305	389	420	349	55	49	52	20	18	19	193	57	-70.5%
Offshore	137	319	239	215	197	92	34	26	12	16	17	45	45	0.0%
Total	1534	2017	2420	2774	1638	638	173	160	68	58	55	667	181	-72.9%
GAS WELLS COMPLETED*														
North	1017	588	680	721	426	176	53	73	24	17	12	124	53	-57.3%
South	323	234	190	281	214	63	21	25	10	8	13	105	31	-70.5%
Offshore	227	286	204	243	172	75	18	26	15	4	11	53	30	-43.4%
Total	1567	1108	1074	1245	812	314	92	124	49	29	36	282	114	-59.6%
DRY HOLES DRILLED*														
North	1067	897	1195	1178	691	178	204	106	43	25	13	203	81	-60.1%
South	802	654	669	624	473	103	72	73	28	37	27	225	92	-59.1%
Offshore (Incl. fed. water)	273	489	293	296	259	79	52	50	31	17	34	78	82	5.1%
Total	2142	2040	2157	2098	1423	360	328	229	102	79	74	506	255	-49.6%
PRODUCING WELLS														
Crude Oil	23259	23710	24815	26066	26431	26607	26036	25570	25858	25840	NA	26985	NA	
Natural Gas	13855	14166	14299	14513	14234	14278	14035	13808	13962	13633	NA	14620	NA	
Total	37126	37819	39046	40555	40655	40855	40071	39378	39820	39473	NA	41605	NA	
PRODUCING WELLS ABANDONED	1255	1043	1174	1826	2195	460	684	367	NA	NA	NA	684	NA	

*Source: Petroleum Information Corporation. Well data after August, 1986 includes workovers. CES maintains additional data in the Indicators Database.
NA = Not available from source

Production

LOUISIANA OIL PRODUCTION



NATURAL GAS
MARKETED PRODUCTION

ELECTRICITY CONSUMPTION
LOUISIANA

APRIL 1987

Figures represent TOTAL except when otherwise noted

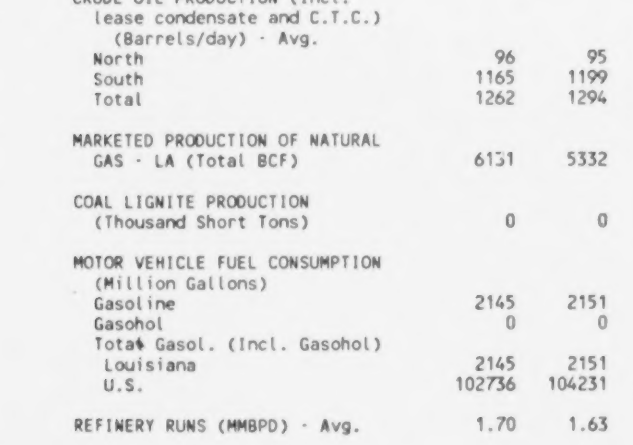
Totals may not add due to rounding

Indicator	1982	1983	1984	1985	1986	86.2	86.3	86.4	Jan	Feb	Mar	Year to Date Through Last Month Reported Mar 1986	Year to Date Through Last Month Reported Mar 1987	% Change
CRUDE OIL PRODUCTION (Incl. lease condensate and C.T.C.) (Barrels/day) - Avg.														
North	96	95	91	88	81	79	83	80	75	74	75	80	75	-6.3%
South	1165	1199	1286	1341	1277	1239	1270	1290	1265	1265	1266	1309	1265	-3.4%
Total	1262	1294	1377	1428	1358	1318	1353	1371	1340	1340	1341	1390	1340	-3.6%
MARKETED PRODUCTION OF NATURAL GAS - LA (Total BCF)	6131	5332	5840	5159	4903	1161	1159	1255	473	419e	437e	1328	1329	0.1%
COAL LIGNITE PRODUCTION (Thousand Short Tons)	0	0	0	206	2217	639	600	426	189	181	260	552	630	14.1%
MOTOR VEHICLE FUEL CONSUMPTION (Million Gallons)														
Gasoline	2145	2151	2142	1949	1824	485	431	428	162	111	133	480	406	-15.4%
Gasohol	0	0	24	265	157	39	7	11	26	34	39	39	99	14.7%
Total Gasol. (Incl. Gasohol)														
Louisiana	2145	2151	2167	2213	1981	492	442	529	188	145	172	519	504	-2.9%
U.S.	102736	104231	106331	108876	111977	29047	28960	28107	8703	7493	8054	25917	24250	-6.4%
REFINERY RUNS (MMBPD) - Avg.	1.70	1.63	1.75	1.74	1.90	1.97	1.89	1.96	2.01	1.79	1.80	1.78	1.87	5.1%
CRUDE OIL STOCK - E.O.M. Avg. (MMBBLS)	12.6	13.3	13.4	13.4	13.4	12.6	14.5	14.2	13.9	14.0	15.0	12.3	14.3	16.3%
ELECTRICITY CONSUMPTION (GWH)*														
Residential	17992	17371	18550	19176	20239	4455	7192	4485	1608	1329	1234	4107	4171	1.6%
Commercial	9959	10008	10941	11576	12685	3095	3742	3067	956	912	893	2781	2761	-0.7%
Industrial	24694	23836	25900	24067	22312	5694	5739	5479	1871	1857	1709	5400	5437	0.7%
Other	4052	4072	4247	3993	3885	987	1054	953	329	298	298	891	925	3.8%
Total	56697	55287	59638	58812	59121	14231	17727	13984	4764	4395	4134	13179	13293	0.9%
ELECTRICITY PRODUCTION (GWH)*														
Gas Generated	35594	28311	29360	27735	26035	6834	8688	6120	1655	965	1512	4393	4132	-5.9%
Oil Generated	940	356	140	100	419	13	389	9	23	3	2	8	28	250.0%
Coal Generated	4998	8377	9830	13968	15587	2811	4467	4754	1398	1190	590	3555	3178	-10.6%
Nuclear Generated	0	0	0	2458	10638	3215	3388	2210	548	1056	1377	1825	2981	63.3%
Total Generated	41532	37044	39330	44261	52679	12873	16932	13093	3624	3213	3480	9781	10318	5.5%

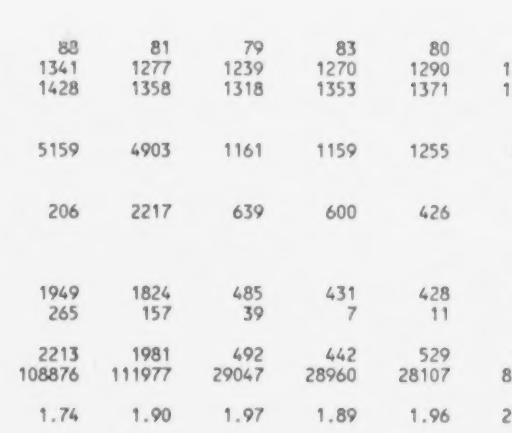
*1 GWH = 1 Million KWH
e = Estimated
NA = Not available from source

Prices & Revenues

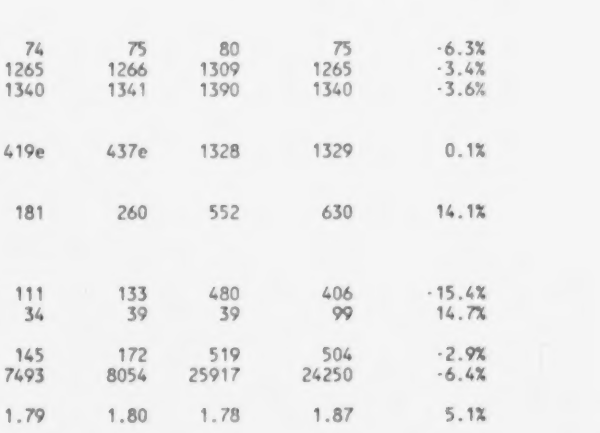
CRUDE OIL PRICES



NATURAL GAS PRICES



RESIDENTIAL ELECTRICITY PRICES



Figures represent TOTAL except when otherwise noted

Totals may not add due to rounding

Indicator	1982	1983	1984	1985	1986	86.2	86.3	86.4	Jan	Feb	Mar	Year to Date Through Last Month Reported Mar 1986	Year to Date Through Last Month Reported Mar 1987	% Change
ELEC. PRICES (Cents/KWH) - Avg.														
Residential														
CLECO	6.8	7.4	7.6	7.3	6.6	6.5	6.3	7.0	6.7	6.7	6.8	6.5	6.7	3.1%
GSU	5.4	6.2	6.1	7.6	6.7	7.1	6.6	6.3	5.6	5.2	6.0	6.8	5.6	-17.6%
LP&L	5.6	5.7	6.1	5.9	6.7	6.8	6.9	6.5	6.3	7.0	7.4	6.7	6.9	3.0%
SWEPCO	4.9	5.7	6.0	6.6	6.7	7.0	6.9	6.6	6.1	6.5	6.4	6.4	6.3	-1.6%
WELLHEAD PRICE OF OIL ($/BBL) - Avg.														
Louisiana	32.45	30.02	29.67	27.23	15.29	13.57	12.93	13.95	16.67	17.18	17.04	20.71	16.96	-18.1%
U.S.	28.54	26.13	25.88	24.08	12.60	10.86	10.17	11.36	13.89	14.50	14.53	18.00	14.31	-20.5%
CRUDE OIL SPOT MARKET PRICE (Avg. End of Week)														
Arab Light	NC	NC	NC	NC	11.58	NR	11.39	11.70	16.64	14.38	17.07	NR	16.03	
W. Texas Int. - Cushing	NC	NC	NC	NC	14.47	13.66	13.85	15.36	18.79	17.66	18.43	NR	18.29	
Louisiana - St. James	NC	NC	NC	NC	14.56	13.98	13.87	15.45	19.38	18.38	18.91	NR	18.89	
NAT. GAS PRICES ($/MCF)-Avg.														
Wellhead - U.S.	2.47	2.59	2.66	2.51	1.86	1.88	1.68	1.65	1.66	1.65	1.65	2.23	1.65	-26.0%
Interstate Indst. Sales (1)	3.75	4.28	4.12	3.91	3.25	3.18	3.06	2.95	3.40	3.35	3.45	3.80	3.40	-10.5%
La. Intrastate (2)	3.69	3.74	3.67	3.26	2.53	2.65	2.48	2.25	2.30	2.29	2.32	2.73	2.30	-15.8%
Spot Market - Vinton	NR	NR	NR	2.43	2.46	1.62	1.48	1.40	1.45	1.50	1.45	2.02	1.47	-27.2%
Spot Market - Garden City	NR	NR	NR	1.63	1.69	1.67	1.53	1.48	1.55	1.60	1.55	2.08	1.57	-24.5%
PRINCIPAL ENERGY RELATED REVENUES (Millions $)														
Sev. - Oil & Condensate	776.8	664.1	653.5	598.3	390.3	84.3	69.9	84.8	18.3	34.4	21.9	151.3	74.6	-50.7%
Sev. - Natural Gas	147.5	132.7	131.3	121.1	126.1	31.1	30.2	32.6	10.6	10.8	10.1	32.3	31.4	-2.8%
Bonuses	59.3	47.0	68.0	32.1	15.9	3.0	2.0	3.1	1.2	0.5	1.4	7.8	3.1	-60.3%
Rentals	53.7	27.7	21.2	20.9	12.3	4.0	2.4	1.9	0.5	0.5	0.7	3.9	1.7	-56.4%
Royalties	482.7	444.9	436.1	379.1	304.5	71.2	83.1	55.6	16.5	22.2	32.3	94.6	71.0	-24.9%
Special Fuels Tax	25.5	27.1	41.1	52.3	57.6	12.7	13.8	14.2	4.9	4.2	3.7	17.0	12.8	-24.7%
Gasoline Tax	162.3	161.0	227.7	286.2	289.5	70.3	63.9	76.1	28.7	24.6	22.7	79.1	76.0	-3.9%
Nat. Gas Franchise Tax	9.6	12.5	11.7	11.0	10.9	3.2	2.4	2.3	0.9	1.7	0.0	3.0	2.6	-13.3%
Total Energy Revenues	1719.4	1519.5	1592.6	1502.9	1211.6	280.8	268.2	271.3	81.6	99.1	95.2	391.3	275.8	-29.5%
TOTAL STATE REVENUES (Millions $)	3969.3	3775.0	3785.2	4335.6	3913.2	1114.9	884.0	938.7	302.4	265.1	238.1	975.6	805.6	-17.4%
ENERGY RELATED REVENUES AS % OF STATE TOTAL	43.3	40.3	42.1	34.7	31.0	25.2	30.3	28.9	27.0	37.4	40.0	40.1	34.2	-14.6%

NR = Not Reported
NC = Not Collected

1. Industrial Sale Price by Major Pipeline Companies.
2. Intrastate price is computed as the weighted average price charged by Louisiana Instrstate, Monterey, and Acadian gas transmission companies. Due to questionable figures, Acadian gas is not figured in the 1985 3rd quarter price.

Louisiana Energy Indicators

Center for Energy Studies
Louisiana State University

Summer 1987

THE GAS SUPPLY OUTLOOK FOR THE GULF COAST

John A. Brickhill
Kenneth R. Moeller
Foster Associates, Inc.

The Gulf Coast region[1] at the present time has substantial uncommitted reserves available for purchase, particularly in the Gulf of Mexico. There is also substantial excess deliverability (production capability in excess of actual production) in this area.

However, we expect that excess deliverability will diminish so that by the 1990s, gas supply availability will be significantly reduced. Based on our projections of reserves additions and total deliverability, under our low price case we project excess Onshore Louisiana deliverability to disappear in 1990; excess Onshore Texas deliverability to disappear in 1992; and excess Gulf of Mexico deliverability to disappear by 1996. Under our high price case, we project excess deliverability in Onshore Texas until 1994 and in the Gulf of Mexico until 1999.

We have projected new gas prices to rise rapidly in the future, reflecting declining deliverability. The gas prices underlying the low and high supply forecasts are shown below.

New Gas Prices
(1987 Dollars/MMBtu)

	Low	High
	(1)	(2)
1992	$2.25	$3.00
1999	3.00	4.00
2007	3.80	5.00

A common benchmark for gas prices in the field is crude oil and we derived our new gas price projections partially on the basis of published crude oil price projections. However, gas prices are also determined by a number of other factors, most importantly supply and demand. The relationship between gas prices and oil prices has never been static in the past, nor is it expected to be in the future. We anticipate that as gas deliverability declines, the price of gas will increase relative to oil.

Supply Projections

As is well known, hydrocarbon exploration has declined tremendously in the past few years from its record high in the early 1980s. The Gulf Coast, a major oil and gas producing area in the U.S., has been no exception. Well drilling in 1986 was one-half to one-third of early 1980 peaks in all areas of the Gulf Coast.

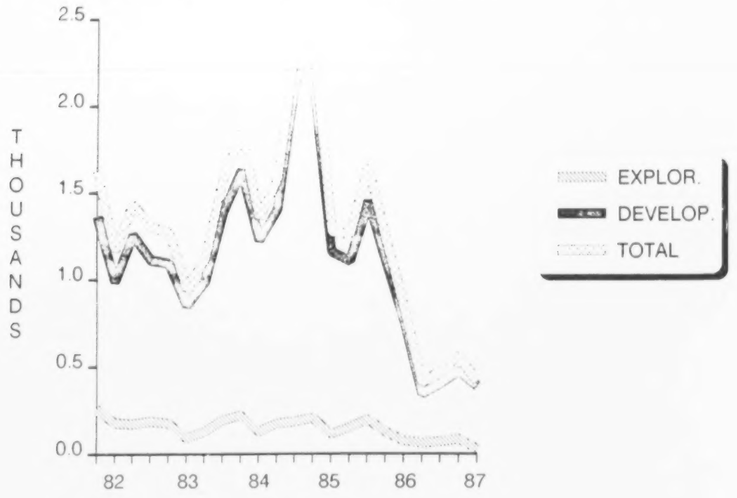
As would be expected from the declines in drilling activity, trends in production and reserves additions have also declined steadily from 1979 to 1985 in the Gulf Coast region. Reserves additions in the area were somewhat less than production during the 1979-1985 period despite the substantial increase in drilling during the early 1980s.

We except that due to low prices and diminished drilling activity described above that maximum potential production in 1992 under the low price case, 10.5 Tcf, will be nearly the same as the actual level of production from the Gulf Coast in 1985. Under the high price case, maximum potential production will be 11.5 Tcf in 1992. In both high and low price cases projected

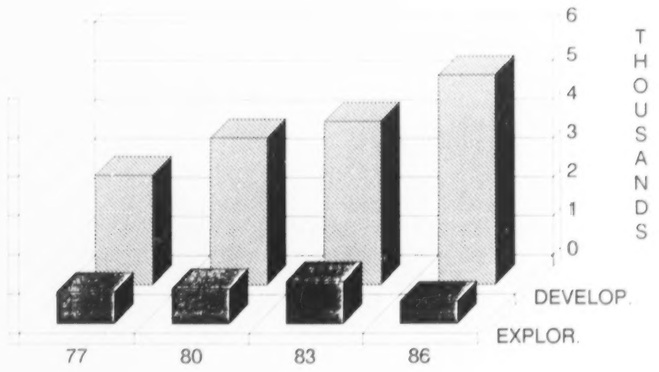
[1]As used herein, the Gulf Coast region is defined as Onshore Texas, Onshore Louisiana and the Gulf of Mexico.

Historical Presentation—Drilling

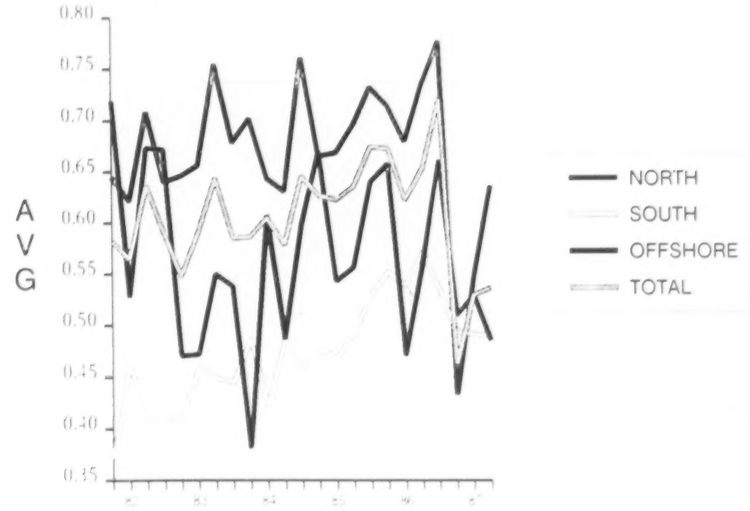
DRILLING PERMITS ISSUED



WELLS DRILLED



WELL COMPLETION SUCCESS RATIO



Figures represent TOTAL except when otherwise noted

Totals may not add due to rounding

Indicator	81.3	81.4	82.1	82.2	82.3	82.4	83.1	83.2	83.3	83.4	84.1	84.2
DRILLING PERMITS ISSUED												
Exploratory	318	263	182	176	189	180	95	131	197	222	131	176
Developmental	1408	1366	988	1260	1113	1093	852	988	1384	1625	1225	1403
Total	1726	1629	1170	1436	1302	1273	947	1119	1581	1847	1356	1579
EXPLORATORY WELLS DRILLED - TOTAL*												
North	149	139	144	124	99	104	76	94	88	80	78	99
South	168	155	149	120	115	108	86	107	109	94	88	116
Offshore (Incl. Fed. Water)	39	77	72	54	61	46	49	152	90	58	60	74
Total	356	371	365	298	275	258	211	353	287	232	226	289
WELL COMPLETION SUCCESS RATIO*												
North	0.64	0.62	0.70	0.64	0.64	0.65	0.75	0.67	0.70	0.64	0.63	0.75
South	0.37	0.46	0.40	0.41	0.41	0.45	0.44	0.44	0.48	0.42	0.48	0.45
Offshore (Incl. Fed. Water)	0.72	0.52	0.67	0.66	0.47	0.47	0.54	0.54	0.38	0.60	0.48	0.60
Total	0.58	0.53	0.59	0.57	0.52	0.52	0.55	0.55	0.52	0.55	0.53	0.60

Indicator	84.3	84.4	85.1	85.2	85.3	85.4	86.1	86.2	86.3	86.4	87.1	87.2
DRILLING PERMITS ISSUED												
Exploratory	187	208	116	154	200	129	76	64	72	86	30	NA
Developmental	2184	2117	1157	1104	1449	1101	763	344	402	474	388	NA
Total	2371	2325	1273	1258	1649	1230	839	408	474	560	418	618
EXPLORATORY WELLS DRILLED - TOTAL*												
North	70	82	87	66	62	54	83	36	37	30	40	56
South	85	81	89	98	75	65	96	49	38	28	39	61
Offshore (Incl. Fed. Water)	55	37	50	69	44	58	54	46	37	32	61	94
Total	210	200	226	233	181	177	233	131	112	90	140	211
WELL COMPLETION SUCCESS RATIO*												
North	0.66	0.66	0.69	0.73	0.71	0.67	0.73	0.77	0.42	0.55	0.64	0.65
South	0.47	0.47	0.49	0.52	0.55	0.54	0.57	0.53	0.47	0.49	0.49	0.59
Offshore (Incl. Fed. Water)	0.67	0.54	0.55	0.64	0.65	0.46	0.55	0.66	0.50	0.53	0.49	0.56
Total	0.60	0.56	0.58	0.63	0.64	0.56	0.62	0.65	0.45	0.53	0.54	0.61

* Source: Petroleum Information Corporation
NA = Not available from source

(Continued from front)

maximum potential production declines steadily from 1992 onwards.

Both interstate and intrastate purchasers have traditionally bought gas in Onshore Louisiana. Intrastate users have primarily relied on indigenous production, so the offshore areas have been the domain of the interstate pipelines. In light of the forecasted decline of onshore production, however, intrastate markets will have to increasingly rely on offshore gas.

The table below illustrates the projected supply/demand balance for the intrastate market in Louisiana assuming a constant share of both demand and supply.

Illustrative Intrastate Louisiana Supply and Demand High Price Case (TCF)

	Louisiana	
	Demand (1)	**Supply (2)**
1992	0.7	0.5
1999	0.6	0.4
2007	0.6	0.3

The above table shows that by 1992 and then beyond the intrastate market will require between 0.2 Tcf and 0.3 Tcf from nonindigenous sources to balance supply and demand.

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E. Fraternity Circle
Louisiana State University
Baton Rouge, LA 70803-0301

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U.S. Postage
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Baton Rouge, LA

Louisiana Energy Indicators is published quarterly by the Center for Energy Studies, Louisiana State University, E. Fraternity Circle, Baton Rouge, LA 70803-0301, (504) 388-4400. For address corrections, please return mailing label to CES with changes. For continued receipt of this and other CES publications, notify Barbara Kavanaugh at the CES address.

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LSU/CES 87E-03